

(3)

OFFICE MEMORANDUM

TO Distribution

DATE: July 20, 1977

FROM A. John Ahlquist, H-8 *A*  
J. R. Harper, H-1 *GRH*  
SUBJECT CONTAMINATION NEAR ULR-33  
SYMBOL H8-77-555

*Richard*  
*This is the money*  
*I promised you - 101*  
*ago. Please check*  
*9 let me know what*  
*was done in 1985 in*

During the final phases of the 1977 Acid-Sewer Line Removal Project, a phoswich survey near ULR-33, an acid sewer manhole, (in the bottom of Los Alamos Canyon north of Omega Road, just west of the bridge), located surface contamination which was identified by spectral analysis (done by C. J. Umbarger) to have  $^{241}\text{Am}$  and  $^{137}\text{Cs}$  as contaminants. Since  $^{241}\text{Am}$  is present,  $^{239}\text{Pu}$  is also likely present. Soil samples were taken for gross-alpha analysis. The initial phoswich survey (using the new portable phoswich and the regular phoswich with an umbilical cord) and soil sampling results are indicated in Fig. 1. The new phoswich had an energy window of 12-20 keV and the regular phoswich a window of 12-40 keV. Further investigation around the location which had the highest phoswich readings revealed an apparent seam of contamination 3-6 cm deep spreading horizontally below the surface. The soil excavated during the investigation ( $\approx 1 \text{ m}^3$ ) was sent to the radioactive waste disposal area. Samples were taken in the excavation which was then backfilled with clean soil. The results of sampling in the excavation are indicated in Fig. 2. No further investigation of surface soil was made. H-7 pumped what fluids it could out of ULR-33. A sample of the "mud" in the manhole contained  $^{241}\text{Am}$ ,  $^{235}\text{U}$ ,  $^{137}\text{Cs}$ , and  $^{60}\text{Co}$ .

*This region*  
*I need the*  
*info for my*  
*report.*

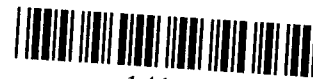
*THANKS!*  
*A*  
*10/8/85*

This area around ULR-33 is easily accessible to the public. [Joggers use Omega Road. A rocket was found in a vent pipe on ULR-33. (The recoverable capsule in the rocket had Dad's screw-pitch gauge as ballast.)]

Because of the levels of contamination and easy public access, we recommend a clean-up action be initiated. Hopefully, a front-end loader and a dump truck or two for a half to one day could clean up this contamination.

AJA:JRH:tj

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*YKA*

FIG. 1

CONTAMINATION INVESTIGATION AROUND ULR-33 (19 MAY 77)  
 PRIOR TO ANY EXCAVATION

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**KEY**

X = SAMPLING OR MEASUREMENT LOCATION

NUMBER BELOW X IS GROSS ALPHA IN PC/G

NUMBER(S) ABOVE X IS (ARE) PROBABLE READING(S)

N = NEW PARTICLE  
 R = REGULAR SEMI-PERMEABLE

~10'



300 to 400(R)

X <25      X <25      X <25

ULR 33

BKG(R) 170(N)  
 X 25      X <25      X 55

4000(R) 2000(R)  
 1600(N) 180(N)  
 X 110      X 48

54(N)  
 X  
 180(N)  
 X

X 37

BKG(R)  
 X

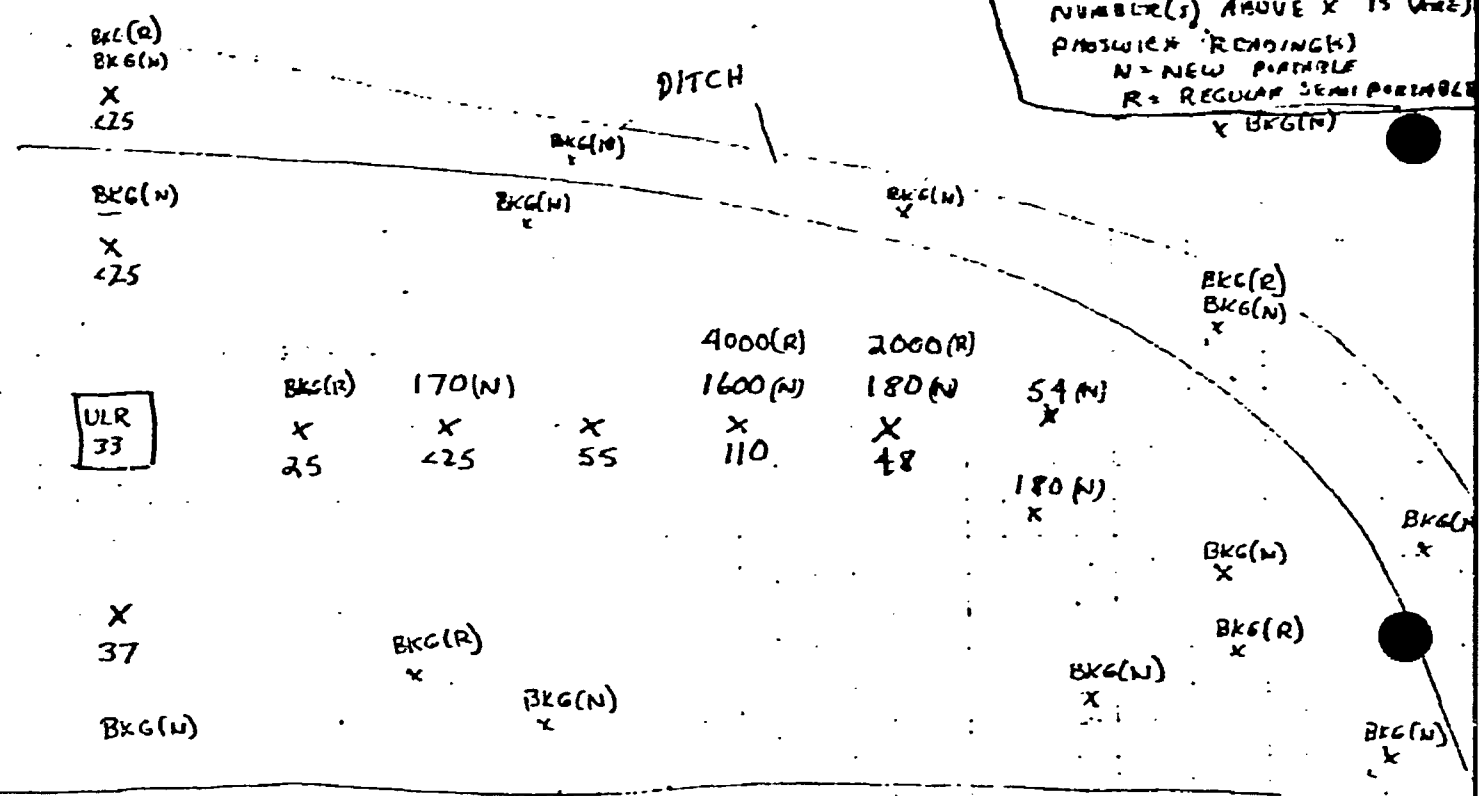
BKG(N)  
 X

BKG(N)  
 X

BKG(R)  
 X

BKG(N)  
 X

OMEGA ROAD



BKG(N)

BKG(N)  
 X

BKG(N)  
 X

BKG(R)  
 BKG(N)  
 X <25

BKG(N)  
 X <25

BKG(N)  
 X

BKG(N)  
 X

BKG(N)  
 X

BKG(R)  
 BKG(N)  
 X

DITCH

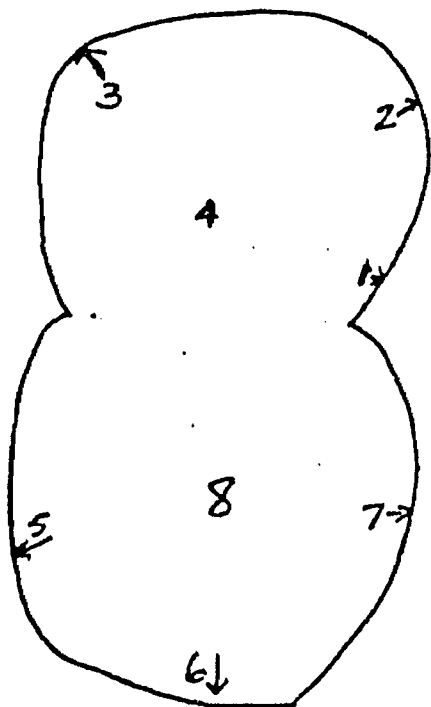
X BKG(N)

BKG(N)

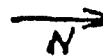
DATE: 05/21/77

Fig. 2: SOIL SAMPLING RESULTS FROM EXCAVATION OF ARCH WITH HIGHEST PHOSWICH READING

EXCAVATION OF ARCH



Samples 4 and 8 were in the bottom of the excavation. The other samples were from the sides of the excavation.



SCALE  
1" = 1'

Sample No.

Gross-Alpha Activity (pCi/g)

1  
2  
3  
4  
5  
6  
7  
8

440  
450  
1660  
1230  
210  
350  
1340  
440